

CLAIMS

What is claimed is:

1. A method of indexing a postage indicium within a database of a centralized postage-issuing computer system, the method comprising:
 - 5 generating a postage indicium associated with a mail piece;
 - associating an indexing tracking ID with the postage indicium; and
 - storing the indexed postage indicium within the database.
2. The method of claim 1, wherein the indexing tracking ID is unique within a postal service.
- 10 3. The method of claim 2, wherein the postal service is the United States Postal Service.
4. The method of claim 1, wherein the postage indicium comprises one or more items selected from the group consisting of postage amount, date and time of postage information creation, service class, optional data advance, and delivery zip code.
- 15 5. The method of claim 1, further comprising:
 - deriving a digital signature from the postage indicium;
 - associating the digital signature with the postage indicium to generate an indexed self-validating postage indicium; and
 - storing the indexed self-validating postage indicium within the centralized postage-
- 20 issuing computer system.
6. The method of claim 5, wherein the digital signature association comprises attaching the digital signature to the postage indicium.

7. The method of claim 5, wherein the digital signature is generated by applying a private key to the postage indicium.

8. The method of claim 5, wherein the indexed self-validating postage indicium is generated within a physically secure coprocessor device.

5 9. The method of claim 1, further comprising:
receiving an indexing identifier request from an end user computer; and
transmitting the indexing tracking ID to the end user computer.

10 10. The method of claim 1, further comprising:
receiving a postage indicium request containing the indexing tracking ID from a postal authority;
retrieving the indexed postage indicium from the database based on the received indexing tracking ID; and

transmitting the indexed postage indicium to the postal authority.

15 11. The method of claim 1, further comprising:
generating a plurality of postage indicia associated with a plurality of mail pieces;
associating a plurality of indexing tracking IDs with the plurality of postage indicia; and
storing the plurality of indexed postage indicia within the database.

12. The method of claim 11, further comprising:
receiving a plurality of indexing identifier requests from a plurality of end user

20 computers; and

transmitting the plurality of indexing tracking IDs to the plurality of end user computers.

13. The method of claim 11, further comprising:

receiving a plurality of postage indicium requests containing the plurality of indexing tracking IDs from a postal authority;

retrieving the plurality of indexed postage indicia from the database based on the plurality of received indexing tracking IDs; and

5 transmitting the plurality of indexed postage indicia to the postal authority.

14. A method of validating postage for a postal service, the method comprising:

generating a postage indicium associated with a mail piece;

associating an indexing tracking ID with the postage indicium;

storing the indexed postage indicium within a database;

10 applying the indexing tracking ID to the mail piece;

reading the indexing tracking ID on the mail piece; and

retrieving the indexed postage indicium from the database based on the read indexing tracking ID.

15 15. The method of claim 14, wherein the indexing tracking ID is unique within the postal service.

16. The method of claim 15, wherein the postal service is the United States Postal Service.

20 17. The method of claim 14, wherein the postage indicium comprises one or more items selected from the group consisting of postage amount, date and time of postage information creation, service class, optional data advance, and delivery zip code.

18. The method of claim 14, further comprising:

deriving a digital signature from the postage indicium;

associating the digital signature with the postage indicium to generate an indexed self-validating postage indicium; and

storing the indexed self-validating postage indicium within the centralized postage-issuing computer system.

5 19. The method of claim 18, wherein the digital signature association comprises attaching the digital signature to the postage indicium.

20. The method of claim 18, wherein the digital signature is generated by applying a private key to the postage indicium.

10 21. The method of claim 18, wherein the indexed self-validating postage indicium is generated within a physically secure coprocessor device.

22. The method of claim 14, wherein the indexing tracking ID is applied to the mail piece in a barcode format, and the indexing tracking ID is read using a barcode reader.

23. The method of claim 22, wherein the barcode format is two-dimensional barcode format.

15 24. The method of claim 22, wherein the barcode format is a one-dimensional barcode format.

25. The method of claim 14, wherein the indexing tracking ID is applied to the mail piece in a human-readable format, and the indexing tracking ID is read using an optical character reader.

20 26. The method of claim 14, further comprising
generating a plurality of postage indicia associated with a plurality of mail pieces;
associating a plurality of indexing tracking IDs with the plurality of postage indicia;
storing the plurality of indexed postage indicia within the database;

applying the plurality of indexing tracking IDs to the plurality of mail pieces;
reading the plurality of indexing tracking IDs on the plurality of mail pieces; and
retrieving the plurality of indexed postage indicia from the database based on the
plurality of read indexing tracking IDs.

5 27. A centralized postage-issuing computer system for indexing a postage indicium,
comprising:

data processing circuitry;

a database;

10 a postage indicium generation module, when executed by the data processing circuitry,
configured for generating a postage indicium;

an indexing module, when executed by the data processing circuitry, configured for
associating an indexing tracking ID with the postage indicium; and

15 a database management module, when executed by the data processing circuitry,
configured for storing the indexed postage indicium within the database, and for retrieving the
indexed postage indicium from the database based on the indexing tracking ID.

28. The centralized postage-issuing computer system of claim 27, wherein the
indexing tracking ID is unique within a postal service.

29. The centralized postage-issuing computer system of claim 28, wherein the postal
system is the United States Postal Service.

20 30. The centralized postage-issuing computer system of claim 27, wherein the
postage indicium comprises one or more items selected from the group consisting of postage
amount, date and time of postage information creation, service class, optional data advance, and
delivery zip code.

31. The centralized postage-issuing computer system claim 27, wherein the postage indicium generation module is configured for generating a self-validating postage indicium in response to the indexing identifier request, the indexing module is configured for associating the indexing tracking ID with the self-validating postage indicium, and the database management module is configured for storing the indexed self-validating postage indicium within the database.

32. The centralized postage-issuing computer system of claim 31, wherein the postage indicium generation module comprises:

a postage indicium generation submodule for generating the postage indicium;
a digital signature generation submodule for generating the digital signature; and
an association submodule for associating the digital signature with the postage indicium to generate the self-validating indexed postage indicium.

33. The centralized postage-issuing computer system of claim 27, wherein the database is associated with a physically secure coprocessor device.

34. The centralized postage-issuing computer system of claim 27, further comprising a communications module, when executed by the data processing circuitry, configured for receiving an indexing identifier request from an end user computer, and for transmitting the indexing tracking ID to the end user computer.

35. The centralized postage-issuing computer system of claim 27, further comprising a communications module, when executed by the data processing circuitry, configured for receiving a postage indicium request containing the indexing tracking ID from a postal authority, and for transmitting the retrieved indexed postage indicium to the postal authority.

36. The centralized postage-issuing computer system of claim 27, wherein

the postage indicium generation module is configured for generating a plurality of postage indicia;

the indexing module is configured for associating a plurality of indexing tracking IDs with the plurality of postage indicia; and

5 the database management module is configured for storing the plurality of indexed postage indicia within the database, and for retrieving the plurality of indexed postage indicia from the database based on the plurality of indexing tracking IDs.

37. The centralized postage-issuing computer system of claim 36, further comprising a communications module, when executed by the data processing circuitry, configured for receiving a plurality of indexing identifier requests from a plurality of end user computers, and for transmitting the plurality of indexing tracking IDs to the plurality of end user computers.

38. The centralized postage-issuing computer system of claim 36, further comprising a communications module, when executed by the data processing circuitry, configured for receiving a plurality of postage indicium requests containing the plurality of indexing tracking IDs from a postal authority, and for transmitting the plurality of retrieved indexed postage indicia to the postal authority.

39. A method of validating postage in a postal system, comprising:
receiving a postage indicium request from a postal authority, wherein the postage indicium request carries an indexing tracking ID and is associated with a mail piece inspected by the postage authority;

retrieving an indexed postage indicium from a database based on the received indexing tracking ID; and

transmitting the postage indicium to the postal authority.

40. The method of claim 39, wherein the indexing tracking ID is unique within a postal service.

41. The method of claim 40, wherein the postal service is the United States Postal Service.

5 42. The method of claim 39, wherein the indexed postage indicium comprises one or more items selected from the group consisting of postage amount, date and time of postage information creation, service class, optional data advance, and delivery zip code.

43. The method of claim 39, wherein the indexed postage indicium is a self-validating postage indicium.

10 44. The method of claim 39, wherein the database is associated with a physically secure coprocessor device.

45. The method of claim 39, further comprising:

receiving a plurality of postage indicium requests from a postal authority, wherein the plurality of postage indicium requests carries a plurality of indexing tracking IDs and is

15 associated with a plurality of mail pieces inspected by the postage authority;

retrieving a plurality of indexed postage indicia from the database based on the plurality of received indexing tracking IDs; and

transmitting the plurality of postage indicia to the postal authority.

20 46. A method of indexing sender identification information within a database of a centralized postage-issuing computer system, the method comprising:

generating sender identification information associated with a mail piece;

associating an indexing tracking ID with the sender identification information; and

storing the indexed sender identification information within the database.

47. The method of claim 46, wherein the indexing tracking ID is unique within a postal service.

48. The method of claim 47, wherein the postal service is the United States Postal Service.

5 49. The method of claim 46, wherein the sender identification information comprises one or more items selected from the group consisting of the sender name, sender employer, sender address, and sender zip code.

10 50. The method of claim 46, further comprising:
receiving a sender identification request containing the indexing tracking ID from a mail recipient computer;
retrieving the sender identification information from the database based on the received indexing tracking ID; and
transmitting the sender identification information to the mail recipient computer.

15 51. The method of claim 46, further comprising:
generating a sender identification information associated with a plurality of mail pieces;
associating a plurality of indexing tracking IDs with the sender identification information; and
storing the sender information within the database.

20 52. The method of claim 51, further comprising:
receiving a plurality of sender identification requests containing the plurality of indexing tracking IDs from a plurality of mail recipient computers;
retrieving the sender identification information from the database based on the plurality of received indexing tracking IDs; and

transmitting the sender identification information to the mail recipient computers.

53. A centralized postage-issuing computer system for indexing sender identification information, comprising:

data processing circuitry;

5 a database;

an indexing module, when executed by the data processing circuitry, configured for associating an indexing tracking ID with the sender identification information; and

10 a database management module, when executed by the data processing circuitry, configured for storing the indexed sender identification information within the database, and for retrieving the indexed sender identification information from the database based on the indexing tracking ID.

54. The centralized postage-issuing computer system of claim 53, wherein the indexing tracking ID is unique within a postal service.

15 55. The centralized postage-issuing computer system of claim 54, wherein the postal system is the United States Postal Service.

56. The centralized postage-issuing computer system of claim 53, wherein the sender identification information comprises one or more items selected from the group consisting of the sender name, sender employer, sender address, and sender zip code.

20 57. The centralized postage-issuing computer system of claim 53, further comprising a communications module, when executed by the data processing circuitry, configured for receiving a sender identification request containing the indexing tracking ID from a mail recipient computer, and for transmitting the retrieved indexed sender identification information to the mail recipient computer.

58. The centralized postage-issuing computer system of claim 53, wherein
the indexing module is configured for associating a plurality of indexing tracking IDs
with sender identification information; and

the database management module is configured for storing the indexed sender
5 identification information within the database, and for retrieving the indexed sender
identification information from the database based on the plurality of indexing tracking IDs.

59. The centralized postage-issuing computer system of claim 58, further comprising
a communications module, when executed by the data processing circuitry, configured for
receiving a plurality of sender identifications requests containing the plurality of indexing
10 tracking IDs from a plurality of mail recipient computers, and for transmitting the retrieved
indexed sender identification information to the plurality of mail recipient computers.

60. A method of verifying a sender of a mail piece, comprising:
receiving a sender identification request from mail recipient computer, wherein the
sender identification request carries an indexing tracking ID associated with a mail piece
15 received from a postal authority;

retrieving indexed sender identification information from a database based on the
received indexing tracking ID; and

transmitting the sender identification information to the mail recipient computer.

61. The method of claim 60, wherein the indexing tracking ID is unique within a
20 postal service.

62. The method of claim 61, wherein the postal service is the United States Postal
Service.

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